

# Structural Change and Industrial Diversification in Upstate New York

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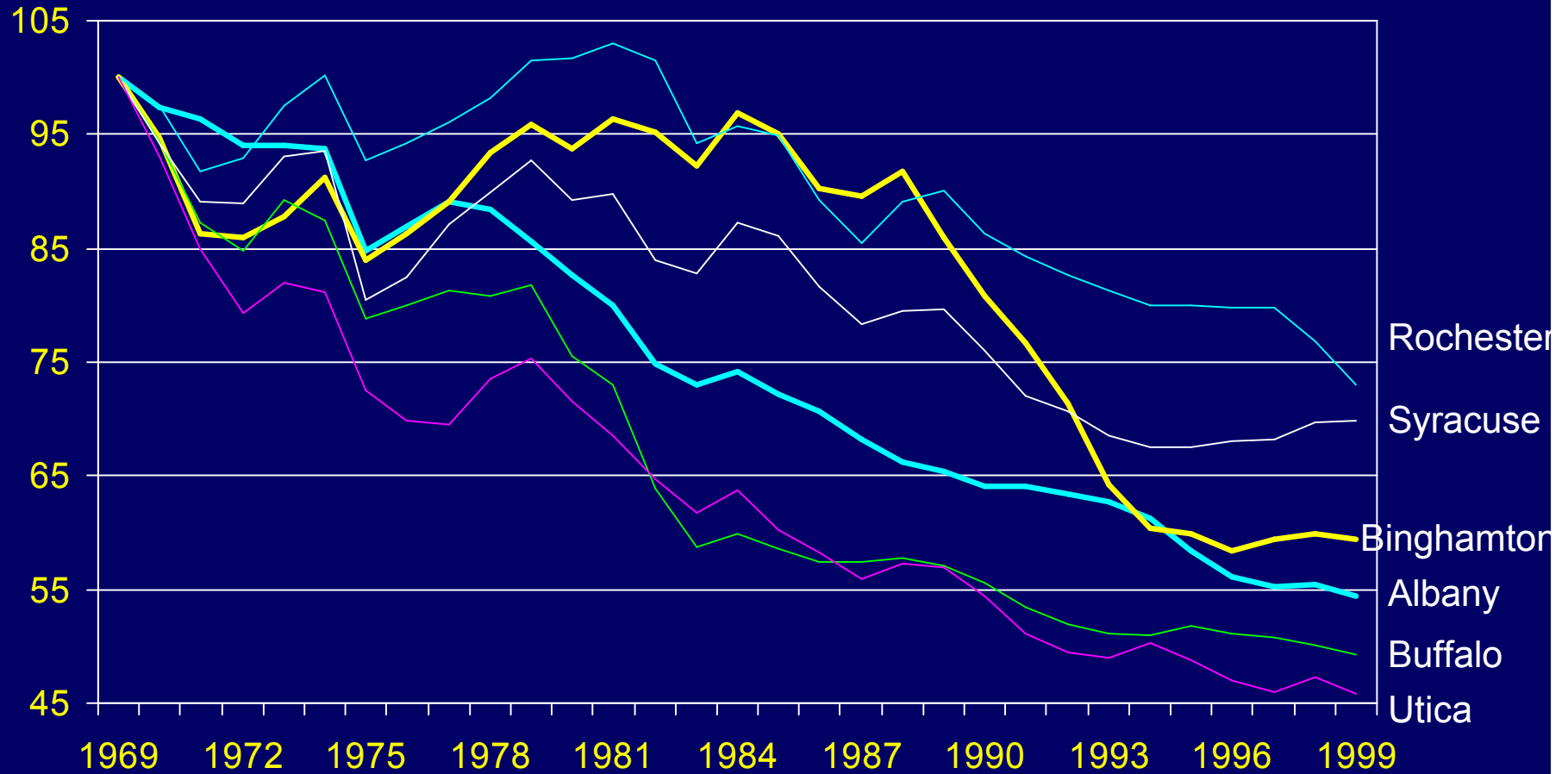
*newsletter available at:*

[www.ny.frb.org/rmaghome/regional/newsletter.html](http://www.ny.frb.org/rmaghome/regional/newsletter.html)

# Manufacturing Declines

# Timing of Manufacturing Losses

Index: 1969 = 100



Source: County Business Patterns

# Economic Restructuring

in the export economy

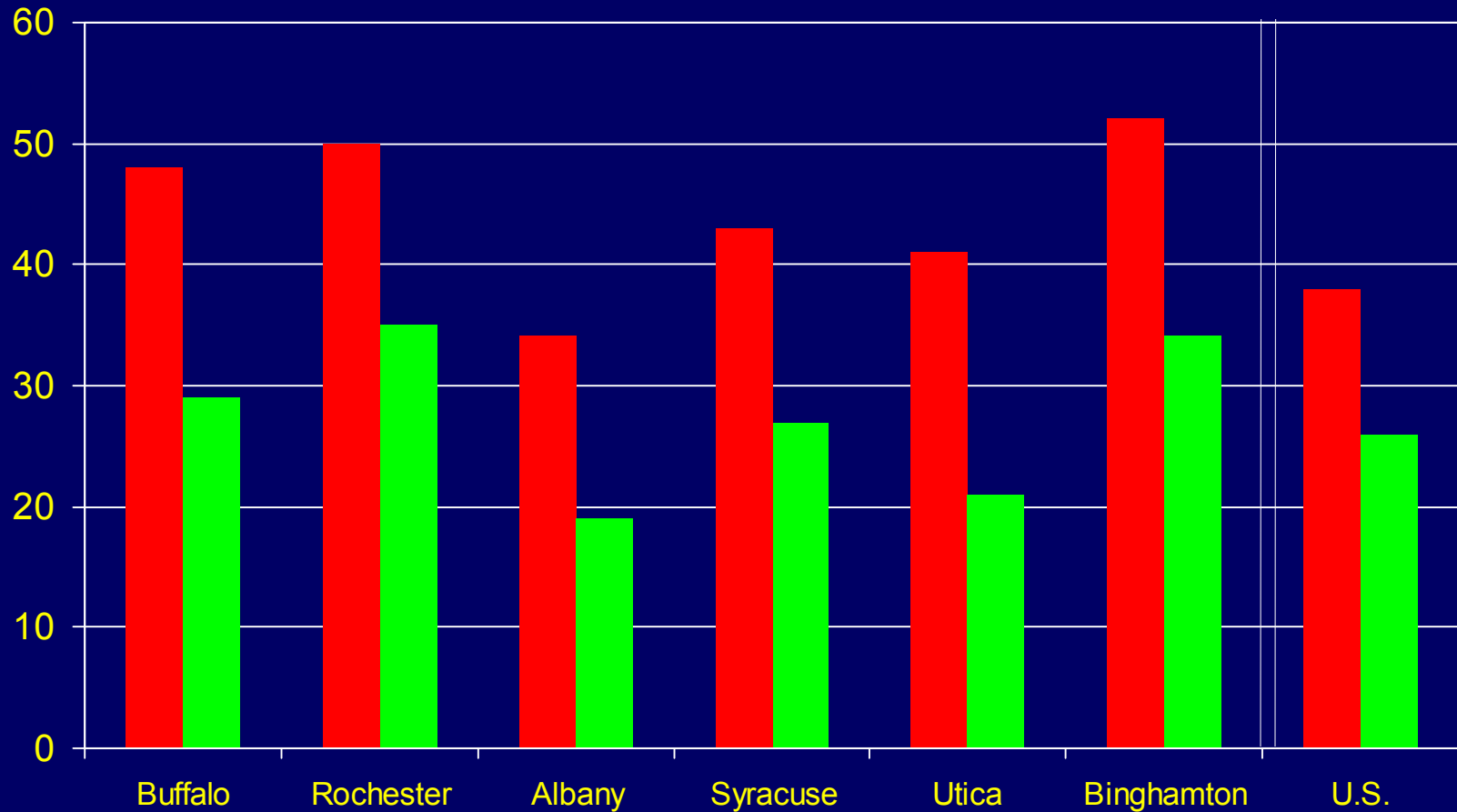
# Method of Analysis

- Traded goods & services
- 3 divisions:
  - Goods production & distribution
  - Producer services
  - Consumer services

# Composition of Earnings: 1969 - 1999

# Goods Production & Distribution: % of Earnings

Percent

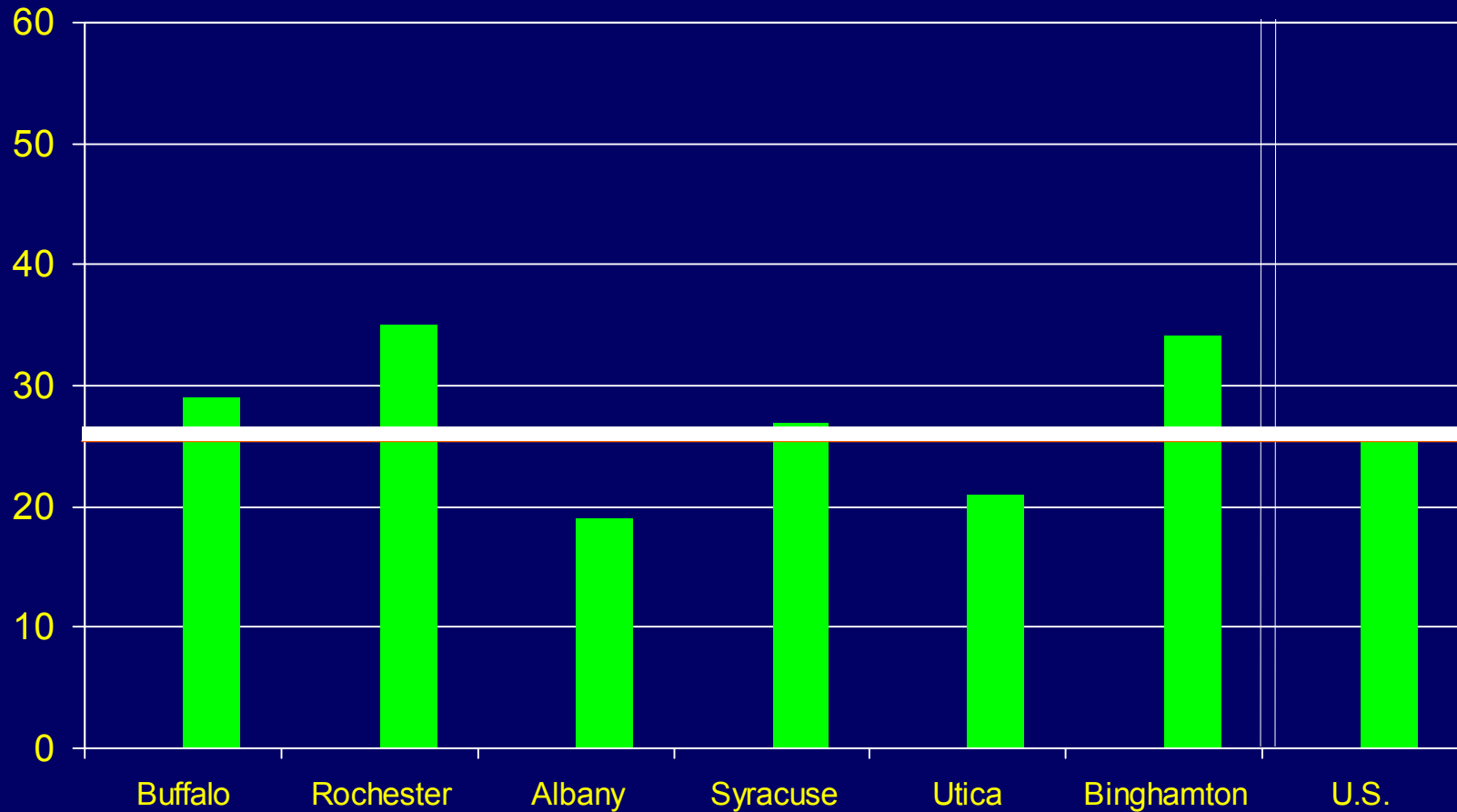


■ 1969  
■ 1999

Source: Bureau of Economic Analysis

# Goods Production & Distribution: % of Earnings

Percent

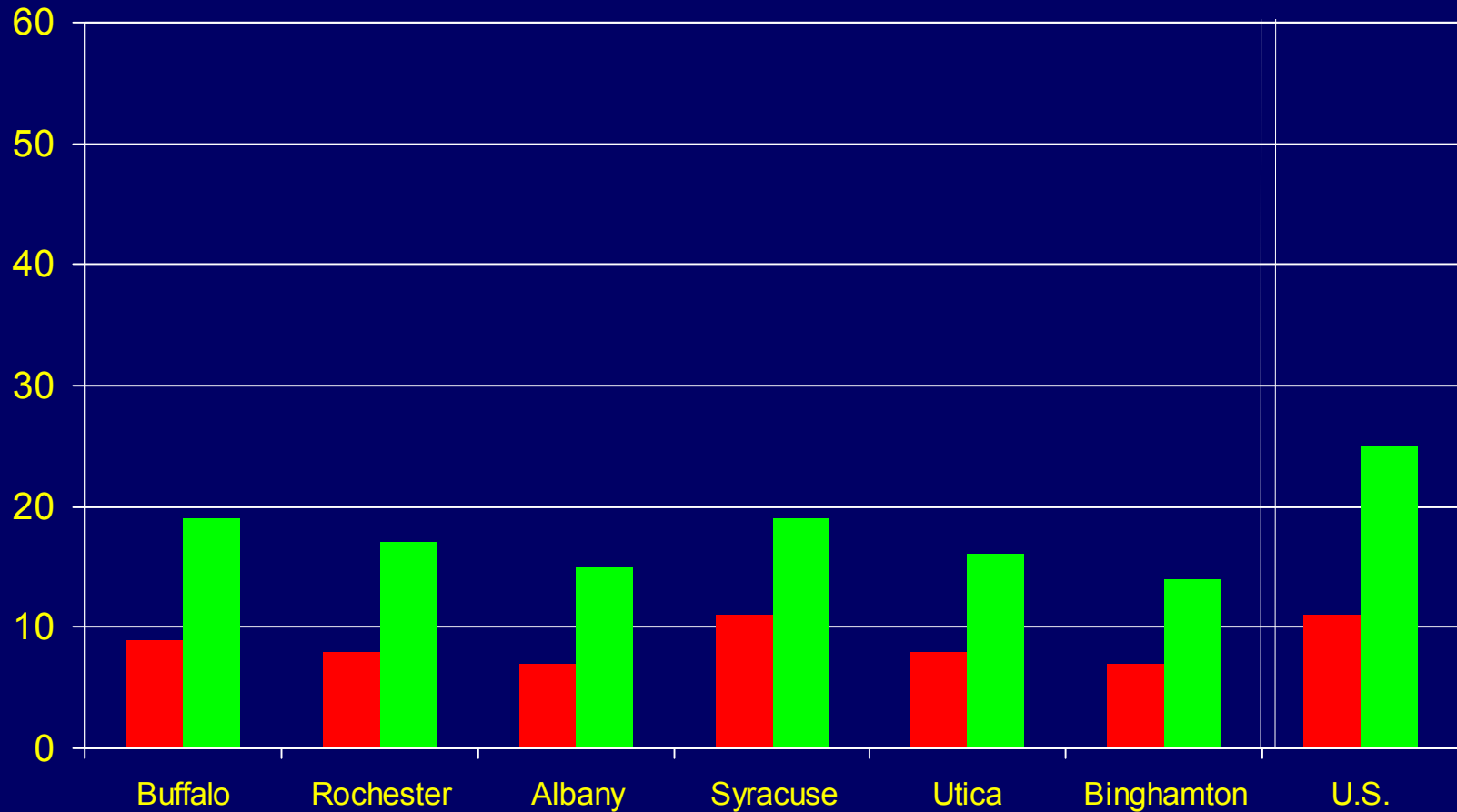


■ 1999

Source: Bureau of Economic Analysis

# Producer Services: % of Earnings

Percent

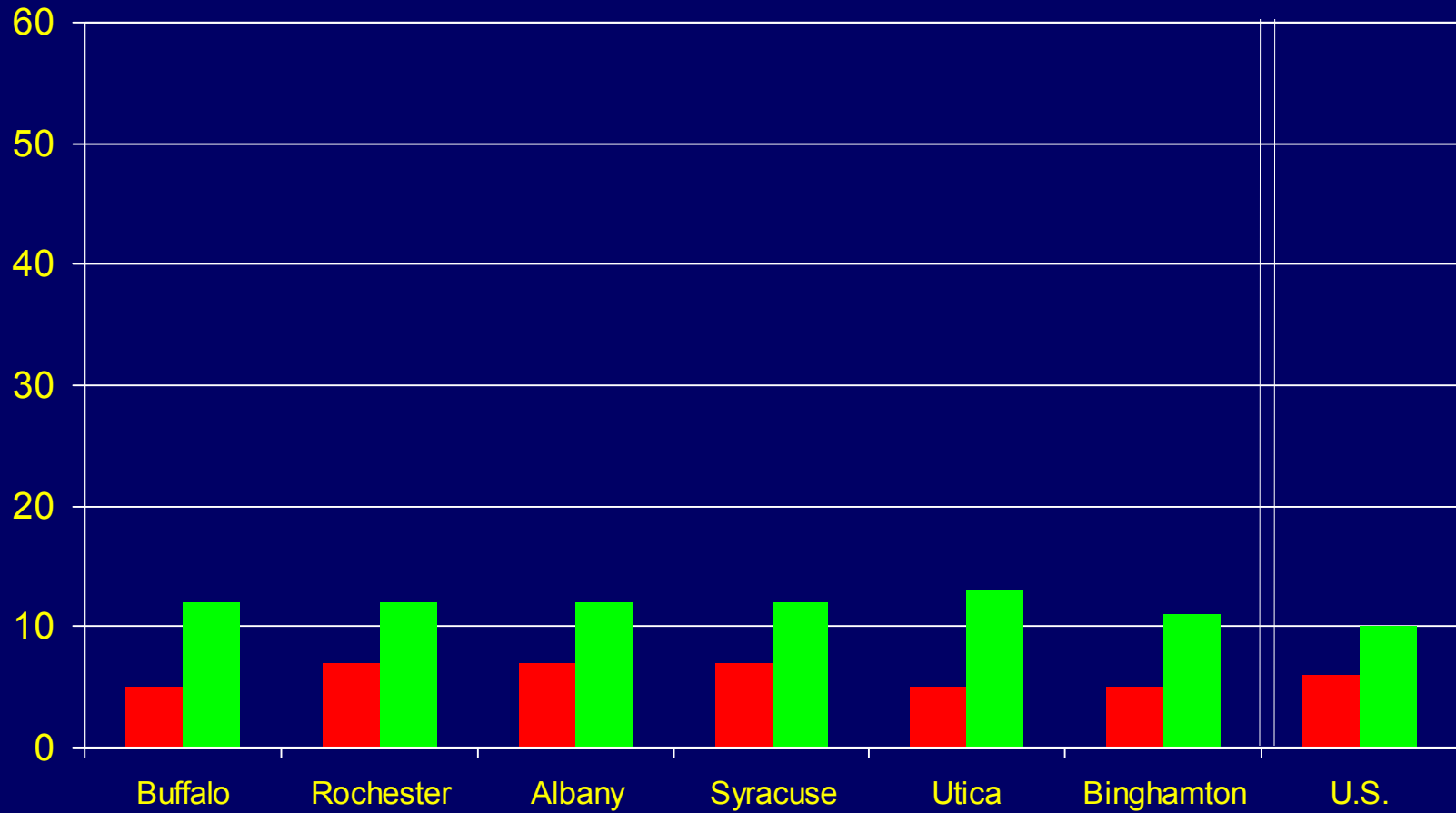


1969  
1999

Source: Bureau of Economic Analysis

# Consumer Services: % of Earnings

Percent



■ 1969  
■ 1999

Source: Bureau of Economic Analysis

Employment: 1969-1997

# Goods Production & Distribution

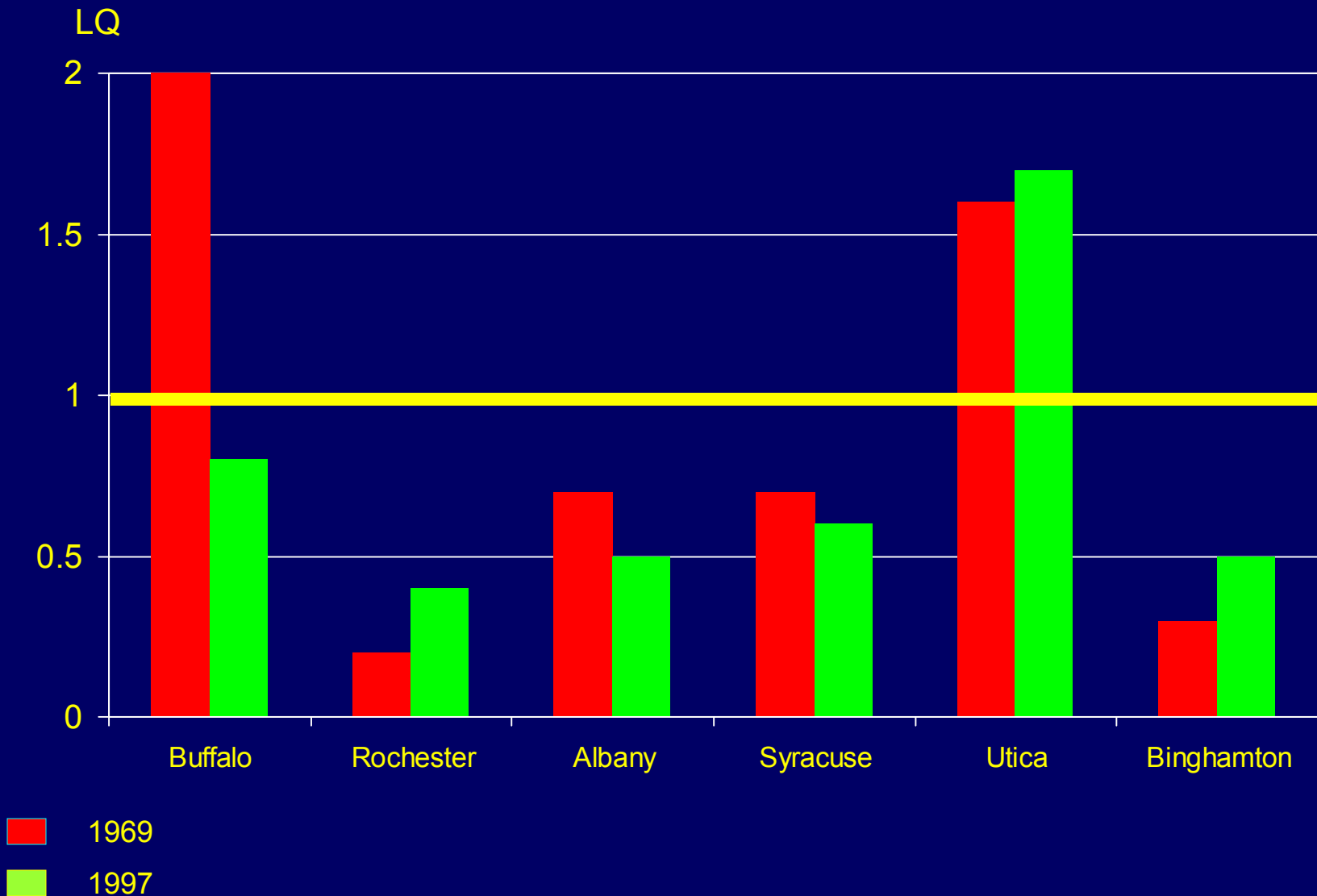
- Resource based manufacturing
  - ag, mining, steel, paper
- Heavy metals manufacturing
  - autos, industrial machinery, fabricated metals
- High-tech manufacturing
  - instruments, electronic & electrical equipment
- Other manufacturing
  - food, tobacco, textiles, apparel, furniture, printing, chemicals, rubber/plastics, leather, etc
- Goods distribution
  - rail, water, pipelines, trucking & warehousing, wholesale trade

# Location Quotients

$$LQ = \frac{\text{\% of total employment in an industry for a region}}{\text{\% of total employment in the industry for the US}}$$

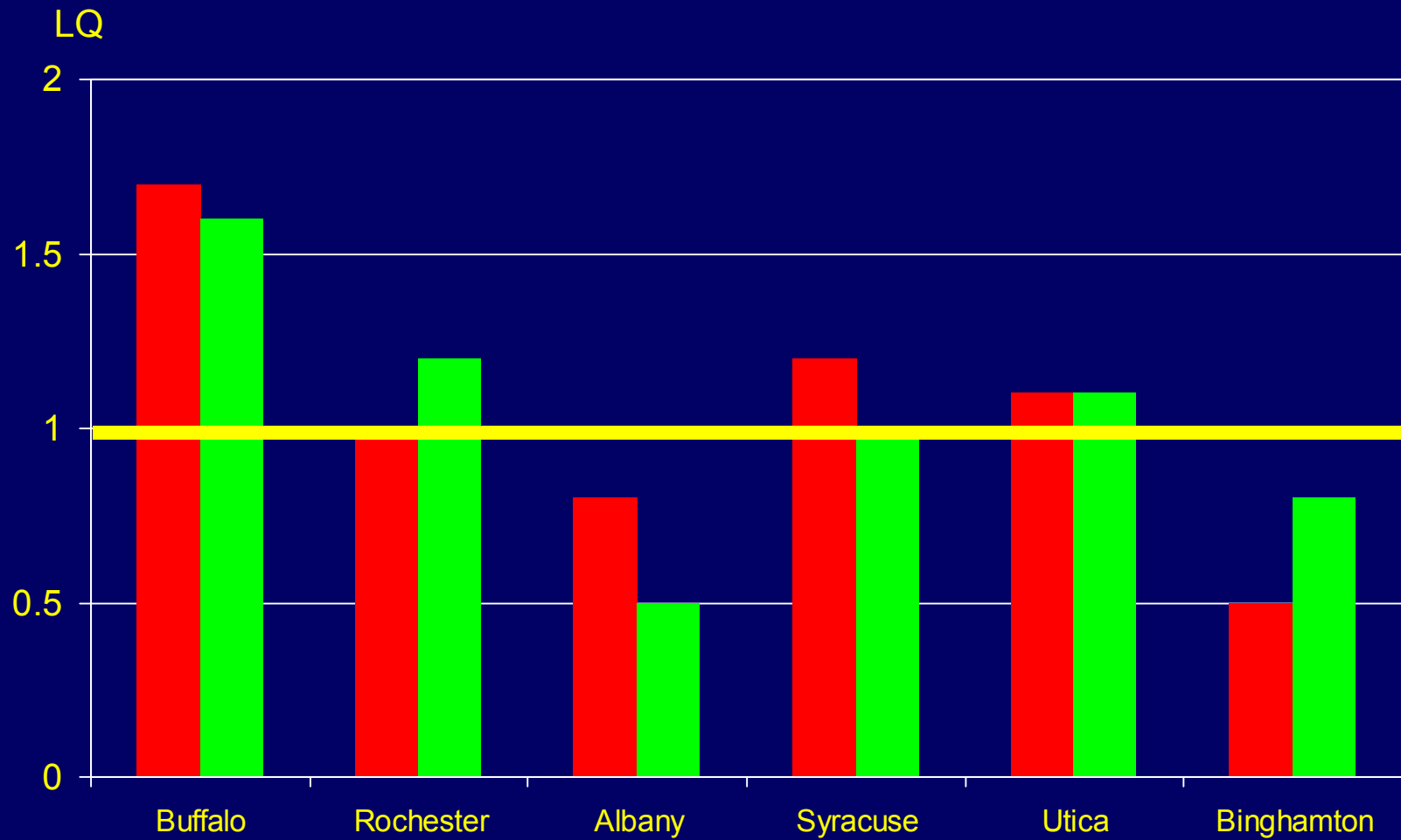
- $LQ > 1$  indicates a region has an above average presence of that industry
  - i.e., industry specialization
- $LQ < 1$  indicates less than average presence of that industry

# Location Quotients: Resource Based Manufacturing



Source: County Business Patterns

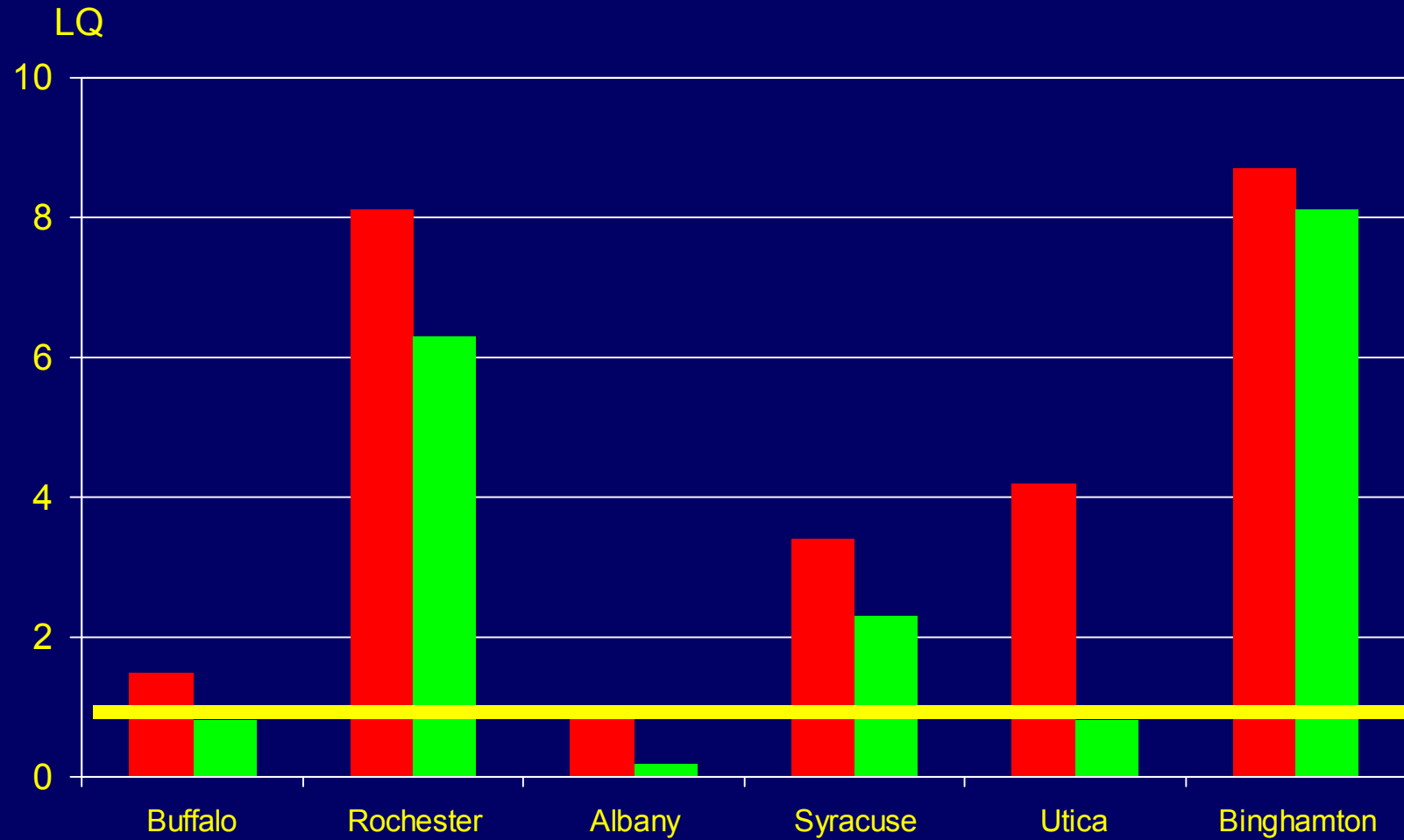
# Location Quotients: Heavy Metal Manufacturing



1969  
1997

Source: County Business Patterns

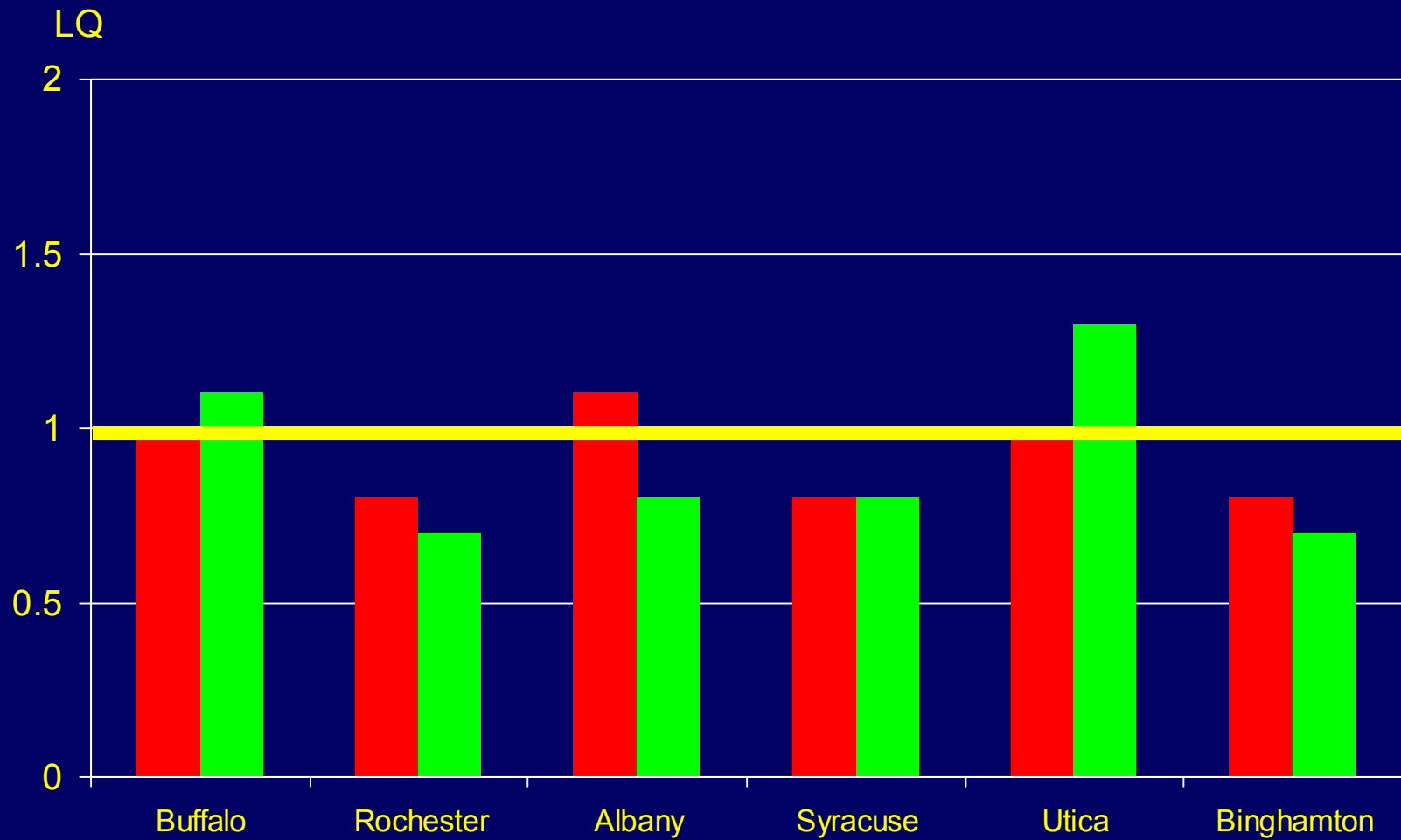
# Location Quotients: High Tech Manufacturing



1969  
1997

Source: County Business Patterns

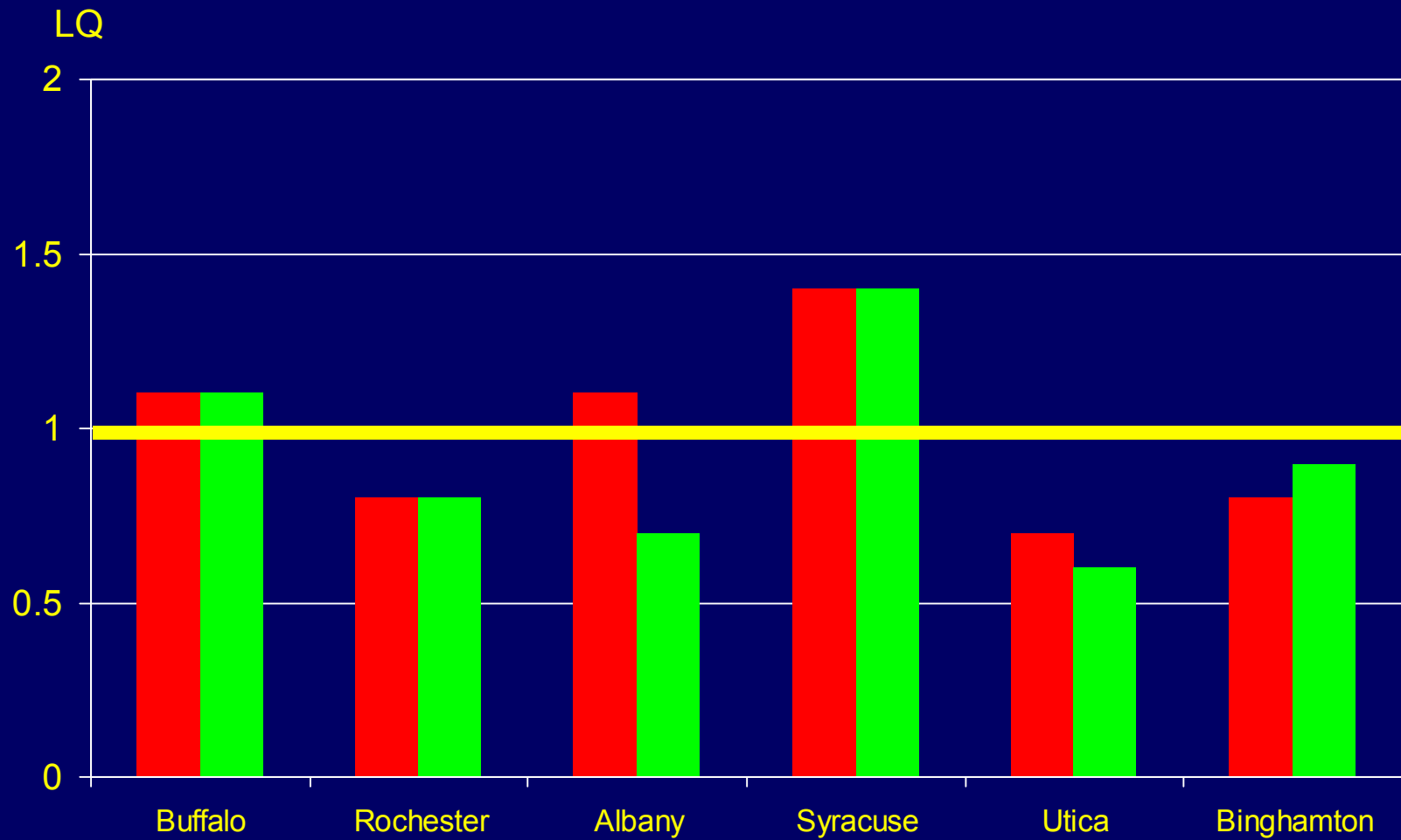
# Location Quotients: All Other Manufacturing



1969  
1997

Source: County Business Patterns

# Location Quotients: Goods Distribution



1969  
1997

Source: County Business Patterns

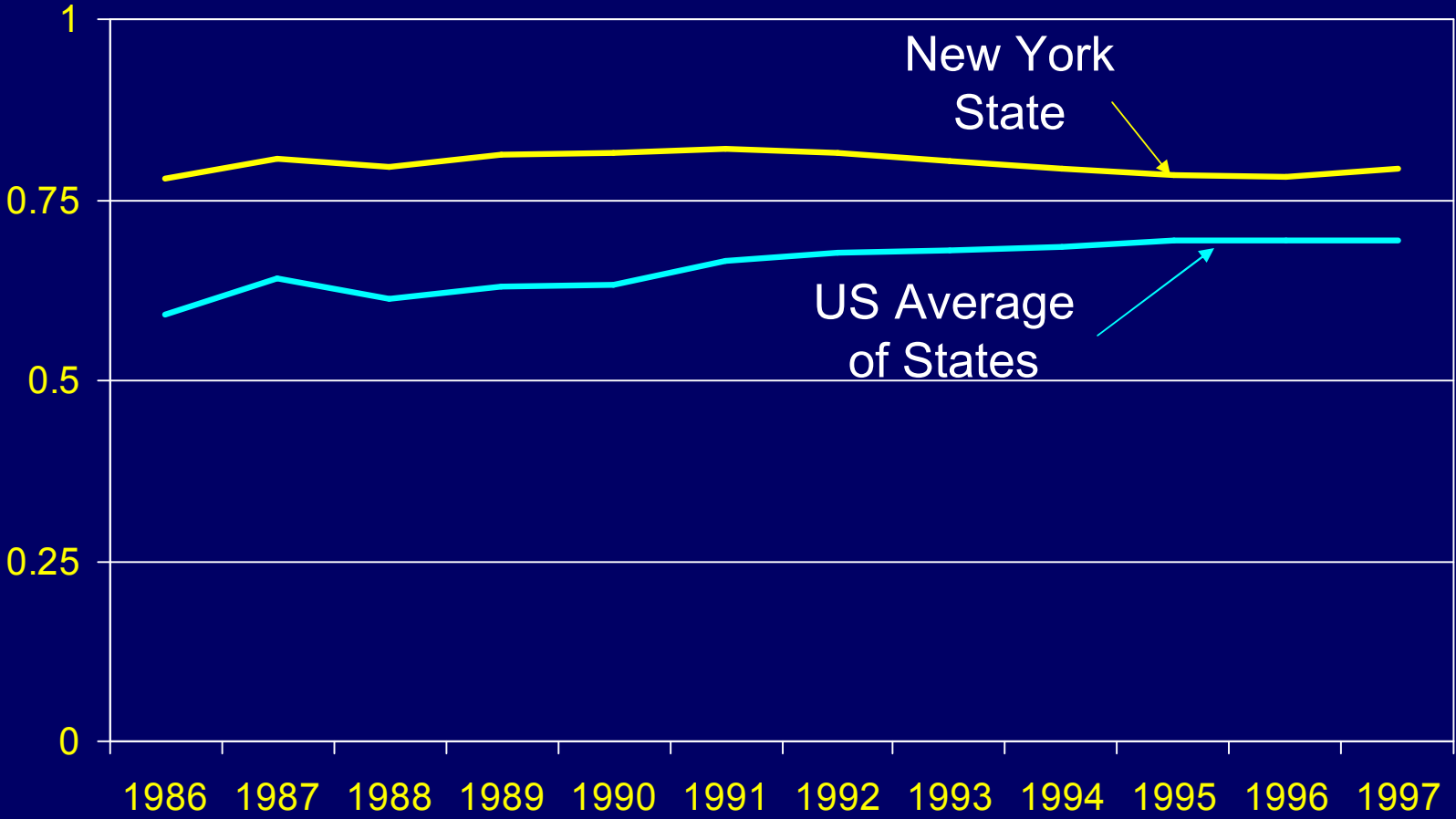
# Diversification of Upstate Economies

# Industrial Diversity Index

- Diversity is the extent to which local economy mirrors the national economy
- Compute the mean of all LQs by three-digit SIC, where each LQ is weighted by relative size of the industry (several hundred industries)
- The reciprocal of above computation will yield a number between 0 and 1
  - 0 is least diverse (most specialized),
  - 1 is most diverse (exactly the same industrial composition of US economy)
- Data stretch back only to 1986

# Diversity Index

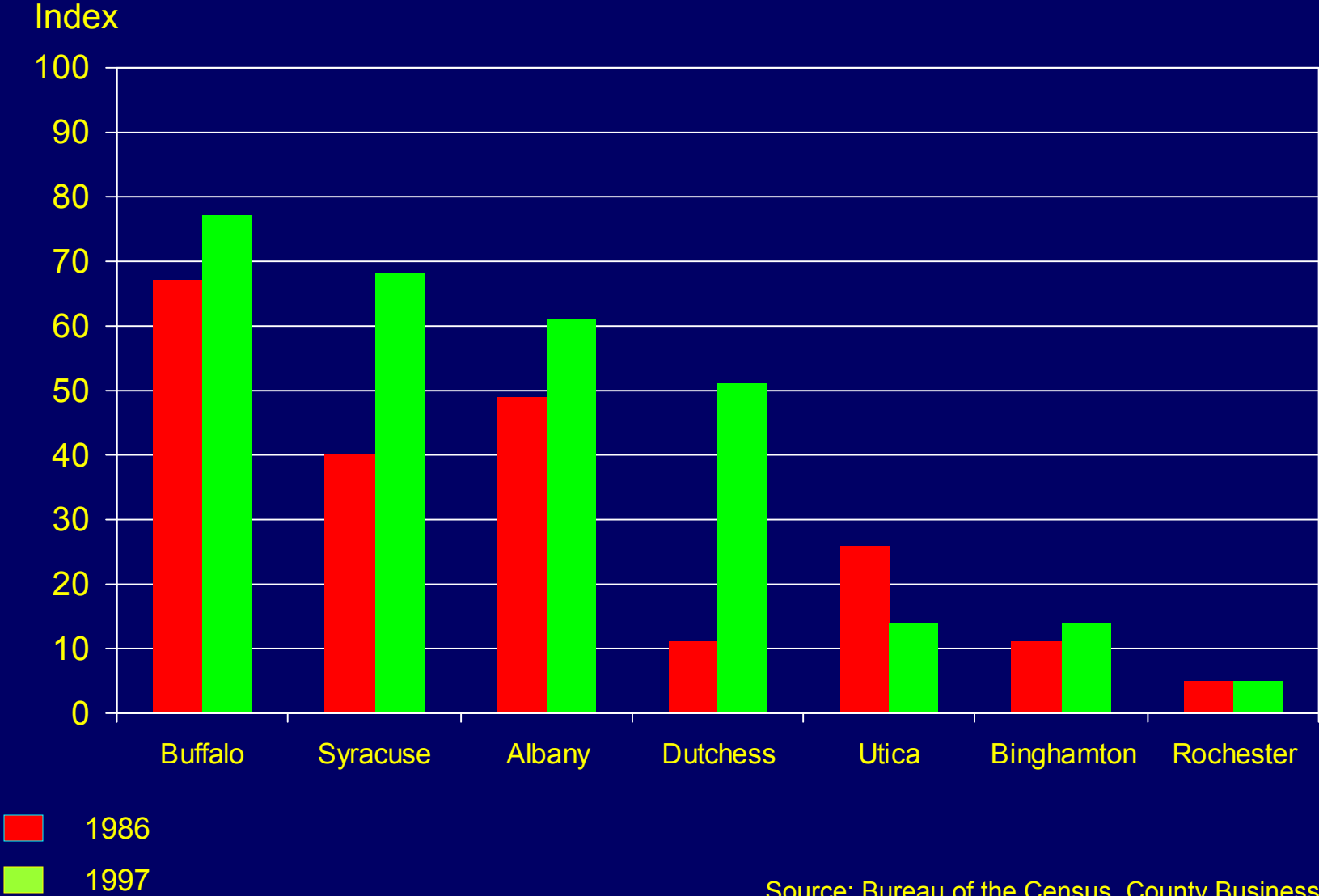
Diversity Index



Source: US Department of Labor

# Most of Upstate is Diversifying

Industrial Diversity Index, 1986-1997



Source: Bureau of the Census, County Business Patterns, author's calculations

# Conclusions

- Binghamton and Western NY still heavily dependent on goods production & distribution
- All upstate metros derive less earnings from producer services than the US average
- All upstate metros derive slightly more earnings from consumer services
- All upstate diversifying economic activity, due in part to losses in once dominant sectors

# REFERENCE CHARTS

# Buffalo

	Buffalo					U.S.
	1969		1997		1969-97	1969-97
	Employ.	LQ	Employ.	LQ	% Chg.	% Chg.
<b>LOSERS</b>						
<b>Resource-based mfg.</b>						
Steel	28,899	5.5	1,675	1.2	-94	-58
Paper	7,134	1.7	2,475	1.0	-65	-6
<b>Heavy metal mfg.</b>						
Fabricated metals	14,226	1.6	8,884	1.4	-38	10
Motor vehicles	25,520	4.6	14,104	4.2	-45	-6
<b>High-tech mfg.</b>						
Electrical equipment	19,713	1.6	4,638	0.7	-76	-21
<b>All other mfg.</b>						
Food	11,934	1.2	6,753	1.1	-43	-3
Industrial chemicals	8,064	4.9	2,284	2.7	-72	-20

# Buffalo

	Buffalo					U.S.
	1969		1997		1969-97	1969-97
	Employ.	LQ	Employ.	LQ	% Chg.	% Chg.
<b>GAINERS</b>						
<b>Financial producer services</b>						
Commercial banks	5,575	1.0	9,982	1.6	79	73
Mortgage brokers	0	0	2,172	2.1	N/A	4294
<b>Nonfinancial producer services</b>						
Computer & data processing	ND	N/A	3,109	0.5	N/A	N/A
Research & testing	2,604	2.2	3,930	2.0	51	156
Legal	1,693	1.2	4,423	1.1	169	331
<b>Consumer services</b>						
Doctors offices & clinics	2,114	0.9	9,195	1.4	335	356
Nursing homes	2,144	0.9	11,434	1.4	433	411
Hospitals	13,467	1.3	29,253	1.4	117	202
Home health care	ND	N/A	7,328	1.9	N/A	N/A
Colleges & universities	1,381	0.5	5,176	1.0	275	192

# Rochester

	Rochester					U.S.
	1969		1997		1969-97	1969-97
	Employ.	LQ	Employ.	LQ	% Chg.	% Chg.
<b>LOSERS</b>						
<b>Heavy metal mfg.</b>						
Industrial machinery	13,462	1.8	8,835	1.5	-34	0
<b>High-tech mfg.</b>						
Communications equipment	12,031	6.0	2,722	3.4	-77	-50
Ophthalmic goods	5,734	55.9	3,108	36.2	-46	7
Photographic equipment	43,672	117.8	31,300	160.4	-28	-33
<b>All other mfg.</b>						
Food	6,752	1.1	2,252	0.5	-67	-3
Mens & boys suits	5,477	10.5	825	8.4	-85	-76

# Rochester

	Rochester					U.S.
	1969		1997		1969-97	1969-97
	Employ.	LQ	Employ.	LQ	% Chg.	% Chg.
<b>GAINERS</b>						
<b>Heavy metal mfg.</b>						
Fabricated metals	4,162	0.8	6,175	1.3	48	10
<b>All other mfg.</b>						
Miscellaneous plastics	941	0.9	3,573	1.5	280	176
<b>Financial producer services</b>						
Real estate	1,806	0.7	5,135	1.2	184	101
<b>Nonfinancial producer services</b>						
Communications	3,591	0.9	4,856	1.1	35	38
Computer & data processing	ND	N/A	7,260	1.6	N/A	N/A
Engineering & Management	2,367	0.7	9,197	1.0	289	270
<b>Consumer services</b>						
Nursing homes	1,516	1.0	7,425	1.2	390	411
Hospitals	5,412	0.8	19,273	1.3	256	202
Home health care	ND	N/A	3,934	1.4	N/A	N/A
Colleges & universities	8,350	4.9	15,096	3.8	81	192

# Binghamton

	1969		1997		1969-97	US
	Total	LQ	Total	LQ	% Change	% Change
<b>LOSERS</b>						
<b>All other mfg.</b>						
Furniture	1183	2.0	267	0.6	-77%	13%
Footware	2768	10.0	175	5.5	-94%	-75%
<b>High-tech mfg.</b>						
Electronic Components & Access	11500	21.6	8500	16.8	-26%	29%
Communications Eqpt	5000	34.6	600	4.7	-88%	24%
Photographic Eqpt	3500	28.0	1130	20.1	-68%	-33%
<b>GAINERS</b>						
<b>Goods distribution</b>						
Wholesale Trade	4322	0.8	5726	1.0	32%	74%
<b>Nonfinancial producer services</b>						
Computer & Data Processing	ND	n/a	864	0.7	n/a	n/a
<b>Consumer services</b>						
Nursing & Personal Care Facilities	230	0.4	2135	1.2	828%	411%
Hospitals	1950	0.9	5032	1.2	158%	202%
Vocational Schools	0	0.0	1325	17.1	na	77%

# Albany

LOSERS	1969		1997		Albany	US
	Emply	LQ	Emply	LQ	% Chg	% Chg
<b>Resource-based mfg.</b>						
Paper	5,004	1.9	2,803	1.4	-44%	-6%
Primary metals	2,901	0.6	624	0.3	-78%	-46%
<b>All other mfg.</b>						
Food	6,365	1.0	3,141	0.6	-51%	-3%
Textiles	5,078	1.3	1,366	0.7	-73%	-43%
Apparel	7,259	1.3	1,121	0.4	-85%	-41%
Stone	5,454	2.3	1,642	1.0	-70%	-17%
<b>Heavy metal mfg.</b>						
Engines & turbines	12,000	24.9	1,750	7.1	-85%	-40%
<b>High-tech mfg.</b>						
Electrical equipment	7,544	1.0	730	0.1	-90%	-21%

# Albany

	1969		1997		Albany	US
<b>GAINERS</b>						
<b>Financial producer services</b>						
Insurance carriers	3,334	0.9	10,777	2.1	223%	62%
<b>Nonfinancial producer services</b>						
Communications	3,595	0.9	4,602	1.0	28%	38%
Computer & data processing	ND	na	9,417	2.0	na	na
Legal	981	1.1	3,442	1.1	251%	331%
Research & testing	4270	6.1	5,555	3.5	30%	172%
<b>Consumer services</b>						
Doctors offices & clinics	1,077	0.8	5,916	1.1	449%	356%
Nursing & personal care facilities	1,164	0.8	9,559	1.4	721%	411%
Home health care	ND	na	3565	1.2	na	na
Colleges & universities	4,286	2.5	13,839	3.2	223%	192%
<b>State Government</b>	42,200	4.1	54,400	3.5	29%	80%

# Syracuse

	Syracuse					US
LOSERS	1969	LQ	1997	LQ	% Chg	% Chg
<b>Resource mfg.</b>						
Primary metals	4,366	1.4	1,517	1.2	-65%	-46%
<b>Heavy metal mfg.</b>						
Fabricated metals	4,262	1.2	2,124	0.7	-50%	10%
Industrial machinery	9,162	1.9	3,965	1.1	-57%	0%
Refrigeration eqpt	5,000	19.4	1,500	5.5	-70%	38%
<b>All other mfg.</b>						
Chemicals	4,946	2.3	1,351	0.9	-73%	-5%
<b>High-Tech mfg.</b>						
Electrical Eqpt	14,164	3.0	5,625	1.9	-60%	-21%
<b>GAINERS</b>						

# Syracuse

	Syracuse					US
Gainers	1969	LQ	1997	LQ	% Chg	% Chg
<b>Goods distribution</b>						
Trucking & warehousing	2,729	1.2	7,404	2.2	171%	87%
<b>Financial producer services</b>						
Insurance carriers	4,797	2.0	6,895	2.3	44%	62%
Real estate	1,425	0.8	3,554	1.3	149%	101%
<b>Nonfinancial producer services</b>						
Computer & data processing	ND	n/a	2,515	0.9	n/a	n/a
Legal	757	1.4	2,039	1.1	169%	331%
<b>Consumer services</b>						
Doctors offices & clinics	783	0.9	3,411	1.1	336%	356%
Nursing & personal care facilities	618	0.6	4,041	1.1	554%	411%
Hospitals	3,946	1.0	12,051	1.3	205%	202%
Colleges & universities	3,500	3.2	8,611	3.5	146%	192%

# Utica

	1969		1997		1969-97	US
<b>LOSERS</b>	Total	LQ	Total	LQ	% Change	% Change
<b>Resource mfg.</b>						
Nonferrous rolling & drawing	5675	23.0	2889	17.9	-49%	-13%
<b>All other mfg.</b>						
Leather	1604	3.0	300	3.7	-81%	-75%
<b>Heavy metal mfg.</b>						
Industrial machinery	4400	1.4	1792	0.9	-59%	0%
Aircraft and parts	2250	2.2	350	0.9	-84%	-49%
<b>High-tech mfg.</b>						
Electrical eqpt.	15500	5.0	482	0.3	-97%	-21%

# Utica

	1969		1997		1969-97	US
<b>GAINERS</b>	Total	LQ	Total	LQ	% Change	% Change
<b>High-tech mfg.</b>						
Instruments	263	0.4	1299	1.6	394%	98%
<b>Financial producer services</b>						
Depository institutions	1425	0.9	2225	1.1	56%	119%
Nondepository institutions	292	0.5	1104	2.0	278%	61%
Insurance carriers	1832	1.2	5736	3.7	213%	62%
<b>Nonfinancial producer services</b>						
Computer & data processing	ND	n/a	1900	1.3	n/a	n/a
<b>Consumer services</b>						
Doctors offices & clinics	536	1.2	1,800	1.3	236%	356%
Nursing & personal care facilities	351	0.7	4579	2.6	1205%	411%
Hospitals	2392	1.1	5478	1.3	129%	202%
Colleges & universities	666	1.2	2087	1.9	213%	192%